Top Tips in Two Minutes: The limping child

Why:

Differentiating between diseases that are benign and self-limiting, acute or life threatening, or chronic and disabling can be challenging. A delay in the diagnosis of certain conditions such as slipped upper femoral epiphysis and septic arthritis can have disabling consequences. Always consider possibility of inflicted injury. Limping in children is never normal.

How:

History

- Age is an important factor in certain differentials
- Explore the nature of the limp, duration of symptoms and presence of pain
- Limping may be due to referred pain (genital/spinal to hip; hip to thigh/knee)
- Interpret history of trauma with caution if mechanism of injury inconsistent with severity/duration of pain. Minor injury can exacerbate a pre-existing condition
- Children with transient synovitis are typically less than 5 years old, are systemically well and wake up in the morning not weight bearing, recovery is usually over 48 hours

Examination

- Examine the whole child (including soles of the feet!)
- Careful examination of the hips is essential as this is a common source of unexplained limp
- Knee pain is hip pain until proven otherwise
- Record temperature. Examine for bruises, spinal and bony tenderness, and gait abnormality
- Examination of the abdomen and testicles is crucial as intra-abdominal pathology and testicular torsion can present as a limp.

All ages	Toddler (1-3 years)	Child (4-10 years)	Adolescent (11-16 years)
Trauma	Transient synovitis	Transient synovitis	Slipped upper femoral epiphysis
Discitis	Toddler's fracture	Juvenile arthritis	Osteochondritis dissecans
Septic arthritis	Child abuse	Perthes' disease	Overuse syndromes
Osteomyelitis	DDH	Rheumatic fever	
Neoplasia	Juvenile arthritis	Haemophilia	
Sickle cell disease	Neuromuscular	HSP	
Serum sickness	Haemophilia		
	HSP		

What Next and When:

When to refer (referral best **directly to ED** (no letter required) who will involve the paediatric on-call team as appropriate):

- General: Systemic illness, unable to weight bear, fever, possible SUFE (hip pain in age 8 or over)
- Malignancy: Night pain, night sweats, pallor, bruising, organomegaly
- Sepsis: Fever (T >38.5C), younger age, immunocompromised
- Suspected non-accidental injury

Investigations to consider (best left to secondary care as often not diagnostic anyway)

- Bloods: FBC, ESR, CRP, blood culture
- Imaging: X-ray: pelvis, frog leg lateral view, USS especially < 8 yrs old: hip effusion, MRI
- Additional: creatinine kinase (muscular dystrophy), immunogenic markers (rheumatological), sickle cell screen (high risk groups)

Where else:

Refer to Paediatric Rapid Referral Clinic via C&B or by Fax: :

- Rheumatological: Leg length discrepancy, multiple joints affected, prolonged duration (>2 weeks)

References:

Perry, D C, Bruce C: Evaluating the child who presents with an acute limp. BMJ (2010) **341:** c4250;
Naveed, A, Heinz P: Joint pain in children. Paediatrics and Child Health 02/2014; 24(2):45–50. DOI: 10.1016/j.paed.2013.08.001

Web links: N/A

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